12.6.D1 ~ Rewriting Radicals   Past due on_____ Period_____

1) What are the first 12 perfect squares?

Rewrite each radical by extracting all perfect squares. SHOW ALL WORK. (If necessary, refer to the 12.6 example "Simplifying Square Roots" in the Chapter 12 Summary.)

2) $\sqrt{18}$ 3) $\sqrt{24}$

4) $\sqrt{45}$ 5) $\sqrt{54}$

6) $\sqrt{72}$ 7) $\sqrt{112}$

Factor each DIFFERENCE OF TWO SQUARES or PERFECT SQUARE TRINOMIAL completely. Remember to look for a GCF first! (If necessary, refer to the 12.5 example "Identifying Special Products of Degree 2" in the Chapter 12 Summary.)

8) $100x^2 - 49$ 9) $9a^2 + 30a + 25$

10) $9r^2 + 108r + 324$ 11) $5x^2 - 605$

Use the Box Method to factor each trinomial completely. Remember to look for a GCF first!

12) $10b^2 - 29b + 10$

13) $-4b^2 - 8b + 21$

14) $9m^2 + 18m + 5$

15) $4a^2 + 12a + 5$

SPIRAL REVIEW

16) Owen's hourly pay for delivering pizzas is represented by the linear function $f(x) = 6.5 + 0.75x$, where x is the number of pizzas he delivers. Which statements are true about Owen's pay? Select ALL that apply.

A) If Owen delivers 10 pizzas in an hour, he will earn $14 for that hour.
B) If Owen delivers no pizzas, his pay is $6.50 per hour.
C) Owen earns $0.75 for each pizza he delivers.
D) Owen earns 75% of the cost of each pizza.

17) Which formula represents the sequence 5, 10, 15, 20, ...?

A) $a_n = 5 + (n-1) \cdot 2$
B) $a_n = 5 + (n-1) \cdot 5$
C) $a_n = 2 \cdot 5^{n-1}$
D) $a_n = 5 \cdot 2^{n-1}$

18) Which of the following statements is NOT true about the quadratic function $y = 2(x+1)^2 - 2$

A) The vertex is $(-1, -2)$.
B) The function has a maximum value.
C) The range is $y \geq -2$
D) The zeros are -2 and 0.

19) Which of the following points is NOT a solution to the linear inequality $y \leq \frac{5}{4}x + 3$?

A) $(0, -4)$
B) $(-4, 0)$
C) $(4, 0)$
D) $(0, 0)$

20) What is the common ratio of the geometric sequence 6, −3, 1.5, −0.75?

A) −2
B) −0.5
C) 0.5
D) 2